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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,115	07/03/2003	Vladimir Baranov	079012-0102	7685

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EXAMINER	
COOK, LISA V	

ART UNIT	PAPER NUMBER
1641	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/614,115	BARANOV ET AL.	
	Examiner	Art Unit	
	Lisa V. Cook	1641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 19-36* is/are pending in the application.

4a) Of the above claim(s) *30-36* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 19-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/9/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Amendment Entry

1. Applicant's response February 20, 2007 is acknowledged. In the amendment filed therein claims 1, 3, and 29 were modified. Claims 15-18 have been canceled without prejudice or disclaimer. Claims 30-36 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Presently, claims 1-14 and 19-29 are under consideration.

2. The specification and figure 9 have been modified.

3. Rejections and/or objections of record not reiterated herein have been withdrawn.

NEW GROUNDS OF REJECTIONS NECESSITATED BY AMENDMENT

Information Disclosure Statement

4. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the examiner on form PTO-892 or applicant on PTO-1449 has cited the references they have not been considered. For example see pages references listed through out the disclosure and on pages 78-84.

5. The information disclosure statements filed 3/9/07 have been considered as to the merits before First Action.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negative by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

I. Claims 1-5, 10-14 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879).

Cais discloses a method of tagging biologically active material (column 7 lines 9-42) with metals (label/transition elements). The metals include manganese (atomic number 25), silver (atomic number 47), gold (atomic number 79), Cobalt (atomic number 27), iron (atomic number 26), and nickel (atomic number 28). See Table 1. Accordingly the patent to Cais reads on Applicants claims regarding a transition element having an atomic number of 21-29, 39-47, 57-79 or 89.

The metal (label) is conjugated to the biologically active material by an unnatural bound or covalent (chemical) bound. See column 8 line 36 through column 9 line 21 and column 10 lines 56-66.

The tagged biological active material (labeling substance and binding component) are mixed with a sample (ligand) to form a tagged complex. The bound complexes are separated from unbound material. Either the bound or unbound aliquot is measured for the metal content. Column 3 lines 5-22. The metal can be measured via a variety of detection systems including emission spectrophotometer. See column 6 lines 29-42.

Cais also teaches the detection of any transition element/metal in specific binding assays and kits. See column 11 lines 45-66.

Although Cais teaches the reagents required by the claims; it does not specifically teach the reagents in kit configurations including buffers and instructions. However, kits are well known embodiments for assay reagents. Foster et al. (U.S. Patent #4,444,879) describe one example. In their patent kits including the reactant reagents, a microplate, positive controls, negative controls, standards, various buffers, and instructions are taught. The reagents are compartmentalized or packaged separately for utility. See figure 6, and column 15, lines 10-34.

It would have been prima facie obvious to one of ordinary skill in the art at the time of applicant's invention to take the detection assay reagents and kits as taught by Cais and format them into a kits including buffers and instructions because Foster et al. taught that it is convenient to do so and one can enhance sensitivity of a method by providing reagents as a kit.

Further, the reagents in a kit are available in pre-measured amounts, which eliminates the variability that can occur when performing the assay. Kits are also economically beneficial in reagent distribution.

It is also worth noting that the printed matter on instructions merely teaches the use of an existing product, and thus cannot impart patentability. See *In re Ngai*, 5/13/04, Michel, Gajarsa, Linn, per curiam. In other words the printed matter on the instructions in a kit cannot serve to define the kit over the prior art. See *In re Gulack,* 217 USPQ (CAFC 1983).

II. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) and further in view of Maggio (Immunoenzyme technique I, CRC press © 1980, pages 186-187).

Please see Cais in view of Foster et al. as set forth above.

Cais in view of Foster et al. differ from the instant invention in not specifically teaching reagent immobilization (bound to solid support).

However, Maggio disclose enzyme immunoassays wherein either the antigen or antibody is immobilized onto a solid phase. The solid phase can be particles, cellulose, polyacrylamide, agarose, discs, tubes, beads, or micro plates (micro titer plates). See page 186. The reagents can be bound to the solid support by covalent linkage or passive adsorption (non-covalent means). See page 187 1st paragraph. Maggio taught that solid supports such as test strips "are very convenient to wash thereby reducing labor in assay procedures". Page 186, last line.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to immobilize assay reagents on solid support surfaces as taught by Maggio in the assay method/kit of Cais in view of Foster et al. because Maggio taught that reagent immobilized solid supports "are very convenient to wash thereby reducing labor in assay procedures". Page 186, last line. Absent evidence to the contrary the immobilization of reagents is deemed and obvious modification of the assay kits taught by Cais in view of Foster et al.

III. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) and further in view of Neilsen et al. (Spectrochimica Acta Part B, 53, 1998, 339-345).

Please see Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) as set forth above.

Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) differs from the instant invention in not teaching reagents for the analyses related to laser ablation inductively coupled plasma-mass spectrometry and gel electrophoresis.

However, a procedure and reagents useful in inductively coupled plasma-mass spectrometry and further comprising electrophoresis is taught by Neilsen et al. Neilsen et al. employed both immunoelectrophoresis and laser ablation inductively coupled plasma (ICP)-mass spectrometry for the identification and quantification of metal binding proteins in blood serum.

Human serum was enriched with commercially available Co (Cobalt-supplied by Merck) was subjected to electrophoresis and the agarose gels corresponding to the 1st and 2nd dimensions were interrogated and analyzed using a Nd Yag laser (1064 nm) interfaced to ICP-mass spectrometry. See abstract, page 341 – 2.2. Neilsen et al. taught that electrophoresis is a powerful separation procedure (page 340, 1st column, 2nd paragraph) and laser ablation is a versatile solid sampling tool in ICP-spectrometry (page 340, 1st column, 3rd paragraph). The combination provided a novel route for studying metal protein distribution in serum (peak response was linear with concentration and the method showed precise replication (6% RSD), with a detection limit of 0.29ng. See abstract and page 345 Conclusion.

With respect to the transition element or metal being positively charged or adapted to posses a positive charge, it is noted that Cais teaches the same transition metals as the ones claimed and Neilsen teaches the detection procedures as claimed. Absent evidence to the contrary, they necessarily teach the positive charged characteristic.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to measure transition elements (tags) linked to antibodies in the laser ablation inductively coupled plasma-mass spectrometry in combination with gel electrophoresis as taught by Neilsen et al. in the method/reagent kits of Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879), because Neilsen et al. taught that the electrophoresis is a powerful separation procedure (page 340, 1st column, 2nd paragraph) and laser ablation is a versatile solid sampling tool in ICP-spectrometry (page 340, 1st column, 3rd paragraph).

The combination provided a novel route for studying metal protein distribution in serum (peak response was linear with concentration and the method showed precise replication (6% RSD), with a detection limit of 0.29ng. See abstract and page 345 Conclusion.

One having ordinary skill in the art would have been motivated to do this to acquire the enhanced sensitivity, wherein accurate and precise detection is rapidly available.

IV. Claims 19 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) and further in view of Houk et al. (Analytical Chemistry, 1980, Vol.52, pages 2283-2289).

Please see Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) as set forth above.

Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) differ from the instant invention in not specifically teaching that the element is an isotope or ion.

However, Houk et al. disclose methods to measure positive ion mass and trace elements in ICP-MS procedures. See abstract and page 2283 2nd column. Houk et al. also teach the analysis of biological fluids such as urine or blood serum. See page 2288 2nd column-last paragraph. The procedure is taught to facilitate applications of the ICP-MS approach to elemental and isotopic determinations in samples of total solute content greater than 150 μg/ml. See page 2289.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to measure isotope or ion transition elements as taught by Houk et al. in the method/reagent kits of Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) because Houk et al. taught that this facilitated applications of the ICP-MS approach to elemental and isotopic determinations in samples of total solute content greater than 150 μg/ml. See page 2289.

One of ordinary skill in the art would have been motivated to do this in order to increase the ICP-MS detection limits.

V. Claims 22 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) and further in view of Crooke (WO 99/451450).

Please see Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) as set forth above.

Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) differs from the instant invention in not specifically teaching methods/reagent kits utilizing a plurality of tagged transition elements linked to a plurality of biologically active.

These limitations are taught in the methods/reagents of Crooke et al. Crooke et al. are drawn to mass spectrometric methods for biomolecular screening. See abstract. The method provides for screening ligand or combinatorial libraries of compounds against one or more than one biological target molecules. See abstract.

In other words the methods provide for the determining the interaction between one and a plurality of molecular species. See page 1, especially lines 17-19. In one embodiment different molecular weigh tags (distinguishable element tags) are utilized to detect different nucleic acid targets (biologically active materials). See page 10, line 19 for example.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to measure a plurality of biologically active materials bound to transition elements (tags) as taught by Crooke et al. in the method/reagent kits of Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879), because Crooke et al. taught that his method significantly accelerated screening efforts because multiple targets could be screened simultaneously against large numbers of compounds. See page 10 line 25-27. This would reduce processing time, allowing for more data on various compounds simultaneously.

VI. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) and further in view of Mire-Sluis et al.(Journal of Immunological Methods, 186, 1995, pages 157-160).

Please see Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) as set forth above.

Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879) differs from the instant invention in not specifically teaching methods/reagent kits wherein the analyte is a cytokine.

However, Mire-Sluis et al. teach immunoassays to measure cytokines. See abstract. They further disclose that cytokines regulate the maintenance and function of the haematopoietic and immune systems.

Their involvement in a wide variety of clinical disorders has led to the development of numerous assays to measure their presence *in vitro* and *in vivo*. Cytokine levels are also important as potential useful indicators of the presence and severity of a number of disorders. See page 157 1st column.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to measure a cytokine as taught by Mire-Sluis et al. in the method/reagent kits of Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879), because Mire-Sluis et al. taught that cytokines regulate the maintenance and function of the haematopoietic and immune systems. Their involvement in a wide variety of clinical disorders has led to the development of numerous assays to measure their presence *in vitro* and *in vivo*. Cytokine levels are also important as potential useful indicators of the presence and severity of a number of disorders. See page 157 1st column.

One or ordinary skill would have been motivated to detect cytokines in order to assess disorders.

Response to Arguments

7. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The recitation that the transitional element is *positively charged* in the preambles of claim 1 and claim 3 has not been given patentable weight because it has been held that a preamble is denied the effect of a limitation where the claim can otherwise stand alone. *In re Ridden*, 318 F.2d 761, 138 USPQ 112; *In re Maeder*, 337 F.2d 875, 143 USPQ 248.

I. Cais

Applicant contends that among other features that Casi differs from the instant invention in not measuring the transition element by inductively coupled plasma mass spectrometer or inductively coupled plasma optical emission spectrometer. This argument has been carefully considered but not found persuasive because the presently claimed kit merely requires a tag and instructions. The printed matter on instructions merely teaches the use of an existing product, and thus cannot impart patentability. See *In re Ngai*, 5/13/04, Michel, Gajarsa, Linn, per curiam. Although the instructions are directed to inductively coupled plasma mass spectrometer or inductively coupled plasma optical emission spectrometer measurements, the printed matter on the instructions in a kit cannot serve to define the kit over the prior art. See *In re Gulack*, 217 USPQ (CAFC 1983).

II. Foster et al.

Applicant contends that Foster et al. do not disclose a method of mass spectrometry or elemental analysis by an inductively coupled plasma mass spectrometer or inductively coupled plasma optical emission spectrometer. This argument was carefully considered but not found persuasive because the instant claims are not directed to a method but a kit.

Further, it is noted that Foster et al. were added to teach kit embodiments not spectrometry methods.

Applicant argues that the combination of Cais and Foster et al. do not provide all the elements of the amended claims. This argument was carefully considered but not found persuasive because Cais teaches the reagents required by the claims while Foster et al. (U.S. Patent #4,444,879) describe kit embodiments. Therein meeting the limitations of the instant claims.

III. Maggio

Applicant argues that Maggio discloses a solid reagent immobilization immunoassay, but does not disclose ICP-MS. This argument was carefully considered but not found persuasive because the presently claimed kit merely requires a tag and instructions. The printed matter on instructions merely teaches the use of an existing product, and thus cannot impart patentability. See *In re Ngai*, 5/13/04, Michel, Gajarsa, Linn, per curiam. Although the instructions are directed to inductively coupled plasma mass spectrometer or inductively coupled plasma optical emission spectrometer measurements, the printed matter on the instructions in a kit cannot serve to define the kit over the prior art. See *In re Gulack,* 217 USPQ (CAFC 1983).

IV. Neilson

Applicant contends that Neilson discloses a method to identify serum proteins that naturally bind metals (cobalt) and there is no intention to label biological materials (antibodies) or analytes that do not normally bind metals. This argument was carefully considered but not found persuasive because the features upon which applicant relies (i.e., unnatural or abnormal binding) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant argues that Neilson employs immuno-electrophoresis to separate proteins. And this is entirely different from the purpose of the present invention. This argument was carefully considered but not found persuasive because an obviousness rejection is proper so long as the prior art suggests a reason or provides motivation to make the claimed invention, even where the reason or motivation is different from that discovered by applicant. *In re Dillon*, 919 F.2d 688, 696, 16 USPQ 2d 1897, 1904, (Fed. Cir. 1990) (in banc), cert.denied, 111 S.Ct. 1682, (1991).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, it would have been obvious to one of ordinary skill in the art at the time the invention was made to measure transition elements (tags) linked to antibodies in the laser ablation inductively coupled plasma-mass spectrometry in combination with gel electrophoresis as taught by Neilsen et al. in the method/reagent kits of Cais (US Patent #4,205,952) in view of Foster et al. (US Patent #4,444,879), because Neilsen et al. taught that the electrophoresis is a powerful separation procedure (page 340, 1st column, 2nd paragraph) and laser ablation is a versatile solid sampling tool in ICP-spectrometry (page 340, 1st column, 3rd paragraph).

V. Anbar

Applicants argue that Anbar doe not teach transition elements, isotopes, or ions as recited in claims 1, 3, 29 and 30. This argument was carefully considered and found persuasive. The patent to Anbar has been replaced with Houk et al. (Analytical Chemistry, 1980, Vol.52, pages 2283-2289). Houk et al teach transition element measurement in ICP-MS procedures.

VI. V.Crooke

Applicant contends that the method of Crooke teaches ionization of the entire tagged biomolecule instead of the tag itself. This argument was carefully considered but not found persuasive because the features upon which applicant relies (i.e., non-ionization of the entire tagged biomoleucle) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant contends that the present invention completely disintegrates the tagged biomolecule in the ICP source. This argument was carefully considered but not found persuasive because, the instructions are directed to inductively coupled plasma mass spectrometer or inductively coupled plasma optical emission spectrometer measurements, and the printed matter on the instructions in a kit cannot serve to define the kit over the prior art. See *In re Gulack,* 217 USPQ (CAFC 1983).

VII. Mire-Sluis et al.

Applicant contends that the claim limitations as amended are not found in the combination of Cais, Foster, and Mire-Sluis. This argument was carefully considered but not found persuasive because the amendment (effecting the preamble and instructions) does not positively limit the claims.

Declaration of Scott D. Tanner

Applicant's arguments of Long Felt Need have been carefully considered, but not found persuasive because it states that the claimed subject matter solved a problem that was long standing in the art. However, there is no showing that others of ordinary skill in the art were working on the problem and if so, for how long. In addition, there is no evidence that if persons skilled in the art who were presumably working on the problem knew of the teachings of the above cited references, they would still be unable to solve the problem. See MPEP § 716.04.

8. For reasons aforementioned, no claims are allowed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Group 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 1641 – Central Fax number is (571) 273-8300, which is able to receive transmissions 24 hours/day, 7 days/week. In the event Applicant would like to fax an unofficial communication, the Examiner should be contacted for the appropriate Right Fax number.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lisa V. Cook whose telephone number is (571) 272-0816. The examiner can normally be reached on Monday - Friday from 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le, can be reached on (571) 272-0823.

Any inquiry of a general nature or relating to the status of this application should be directed to Group TC 1600 whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see httpr//pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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